

Appl. No. 10/637,191
Amdt. dated 3/21/06
Reply to Office action of November 25, 2005

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-8 and 10-13 are now in the application and are subject to examination. Claim 1 has been amended. Claim 13 has been added. Claim 9 has been canceled.

In "Claim Rejections - 35 USC § 102", item 2 on pages 2-4 of the above-identified Office Action, claims 1-2, 8-9 and 11 have been rejected as being fully anticipated by U.S. Patent No. 5,256,596 to Ackley et al. (hereinafter Ackley) under 35 U.S.C. § 102(b).

In "Claim Rejections - 35 USC § 102", item 3 on page 5 of the Office Action, claims 1, 4, 9-10 and 12 have been rejected as being fully anticipated by U.S. Patent No. 6,882,673 to Wasserbauer et al. (hereinafter Wasserbauer) under 35 U.S.C. § 102(e).

In "Claim Rejections - 35 USC § 103", item 5 on page 6 of the Office Action, claim 3 has been rejected as being obvious over Ackley in view of U.S. Patent No. 5,557,627 to Schneider Jr. et al. (hereinafter Schneider) under 35 U.S.C. § 103(a).

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In "Claim Rejections - 35 USC § 103", item 6 on pages 6-7 of the Office Action, claims 5-7 have been rejected as being obvious over Wasserbauer in view of U.S. Patent No. 5,893,722 to Hibbs-Brenner (hereinafter Hibbs-Brenner) under 35 U.S.C. § 103(a).

The rejections have been noted and the claims have been amended in an effort to even more clearly define the invention of the instant application. More specifically, claim 1 has been amended to state that the mode-selective regions are implantation regions extending into the photon-emitting active layer. New claim 13 has been added, which is similar to claim 1, but also recites the substrate and that the mode-selective regions are implantation regions extending into said substrate.

Support for the mode-selective regions being implantation regions is found in original claim 9 and in lines 2-3 on page 7 of the specification of the instant application. Support for the implantation regions extending into the photon-emitting active layer can be found in the drawing of the instant application. Support for the implantation regions extending into said substrate can be found in lines 2-4 on page 7 of the specification of the instant application.

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Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1 calls for, *inter alia*, a semiconductor laser, comprising:

a vertical resonator formed by reflectors;
a photon-emitting active layer disposed between said reflectors;
at least one current diaphragm for laterally circumscribing a current flowing through said photon-emitting active layer; and
mode-selective regions extending in a vertical direction within said vertical resonator and laterally delimiting said vertical resonator, said mode-selective regions being implantation regions extending into said photon-emitting active layer.

Independent claim 13 calls for, *inter alia*, a semiconductor laser, comprising:

a substrate;
a vertical resonator formed by reflectors;
a photon-emitting active layer disposed between said reflectors;
at least one current diaphragm for laterally circumscribing a current flowing through said photon-emitting active layer; and
mode-selective regions extending in a vertical direction within said vertical resonator and laterally delimiting said vertical resonator, said mode-selective regions being implantation regions extending into said substrate.

Clearly, none of the Ackley, Wasserbauer, Schneider or Hibbs-Brenner references teach or suggest either:

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"said mode-selective regions being implantation regions extending into said photon-emitting active layer" (**hence the active layer is ion-implanted**), as recited in claim 1; or

"said mode-selective regions being implantation regions extending into said substrate", as recited in claim 13, of the instant application.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1 or 13. Claims 1 and 13 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1.

In view of the foregoing, reconsideration and allowance of claims 1-8 and 10-13 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

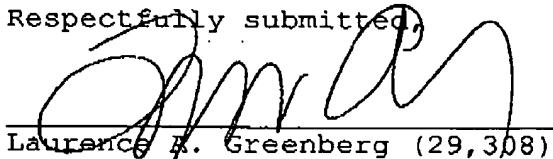
Petition for extension is herewith made. The extension fee for response within a period of one month pursuant to Section

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1.136(a) in the amount of \$120.00 in accordance with Section
1.17 is enclosed herewith.

Please charge any other fees that might be due with respect
to Sections 1.16 and 1.17 to the Deposit Account of Lerner
Greenberg Stemmer LLP, No. 12-1099.

Respectfully submitted,



Laurence A. Greenberg (29,308)

LAG/am

March 21, 2006

Lerner Greenberg Stemmer LLP
P.O. Box 2480
Hollywood, Florida 33022-2480
Tel.: (954) 925-1100
Fax: (954) 925-1101